California ISO
Your Link to Power

California Independent
System Operator Corporation

January 15, 2010

VIA HAND DELIVERY

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, D.C. 20426

Re: **California Independent System Operator Corporation**
Docket No. ER06-615-___

Dear Secretary Bose:

The California Independent System Operator Corporation ("ISO") hereby submits an original and five copies of a report, entitled "THIRD ANNUAL REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR EVALUATING DEMAND RESPONSE PARTICIPATION IN THE ISO (Third Annual Report"). The ISO files this report pursuant to the Commission's June 25, 2007 Order on Compliance (California Independent System Operator Corp. 119 FERC ¶ 61,313 (2007) Paragraph 226 of the Order, directs the ISO to file the annual report.

The CAISO is requesting confidential treatment of the Third Annual Report, which is included as Attachment A to this filing, pursuant to Section 388.112 of the Commission's Regulations. Confidential treatment of this Third Annual Report is appropriate because the report contains commercially-sensitive data regarding the participation of a small number of entities the ISO's markets, and the market participation is heavily weighted in one market participant, such that submitting the data in aggregated form will not mask the market participation of the largest participant. Consistent with Section 388.112, the CAISO is submitting and original and five copies of the redacted version of the Third Annual Report along with the full version of the Third Annual Report, which is sealed and marked as confidential.

COMMUNICATIONS

Correspondence regarding this filing should be directed to:

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CONTENTS OF FILING

The following documents are included in this filing:

(1) This Transmittal Letter;

(2) Attachment A Report, entitled "THIRD ANNUAL REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR EVALUATING DEMAND RESPONSE PARTICIPATION IN THE ISO

	Respectfully submitted, Bill Di Capo BFM Baldassaro "Bill" Di Capo Counsel for the California Independent System Operator Corporation

ATTACHMENT A

ATTACHMENT A
PUBLIC VERSION

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	))	Docket Nos. ER06-615-___

THIRD ANNUAL REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR EVALUATING DEMAND RESPONSE PARTICIPATION IN THE ISO

Reporting Period: Calendar Year 2009

Date: January 15, 2010

Baldassaro ("Bill") Di Capo
Counsel for the California Independent System Operator Corporation

Introduction

How the Obligation to Report Annually Arises

The California Independent System Operator Corporation ("ISO") submits this "THIRD ANNUAL REPORT OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR EVALUATING DEMAND RESPONSE PARTICIPATION IN THE ISO; Re: Calendar Year 2009" (hereinafter, "Third Annual Report")

The reporting requirement emanates from the Commission's June 25, 2007 Order on Compliance[1], which provides that:

> 226. Finally, we direct the CAISO to file annual reports evaluating its demand response programs, including the amount of demand response it has elicited. The CAISO should file the first report January 15, 2008. At a minimum, the CAISO's report must include: (a) information on customer enrollment for each demand response program in terms of the number of customers and total potential in load reduction in MWs; and (b) information on total load reductions achieved per program per event during the prior year, including the CAISO's system load at time of curtailments, total MWs reduced, total payments for reductions and effects of the demand response programs on wholesale prices.[*FN See, e.g. ISO New England, Inc., 102 FERC [Paragraph] 61,202 (2003)*]

The ISO submitted its First Annual Report on January 25, 2008, for the year 2007[2] and its Second Annual Report on January 15, 2009, for the year 2008.[3]

Increased Participation in the ISO's Participating Load Program; New Participating Load Pilot Projects Developed and Operated by California's Investor Owned Utilities in 2009

The ISO is pleased to report new participation by the California Investor Owned Utilities ("IOUs") in the ISO's Participating Load Program in 2009. Participating Load Pilot ("PLP") projects were developed and operated by each of the three California's IOUs over the 2009 summer season. The PLP projects explored the feasibility of configuring end-use customer loads, from residential to industrial loads, to provide

[1] California Independent System Operator Corp. 119 FERC ¶ 61,313 (2007) "June 25, 2007 Order on Compliance Filings" (hereinafter "June 25, 2007 Order")

[2] "First Annual Report of the California Independent System Operator Evaluating Demand Response in The CAISO; Re: Calendar Year 2007. The ISO filed two versions of the First Annual Report: a public version and a confidential version. The public version of the report can be accessed on the CAISO's Web site at http://www.caiso.com/1f59/1f59dcd04ba90.pdf.

[3] Second Annual Report of The California Independent System Operator Evaluating Demand Response in the CAISO; Re: Calendar Year 2008. The ISO also filed a public version and confidential version of the Second Annual Report. The public version can be accessed on the ISO's Web site at http://www.caiso.com/2338/233891875f7d0.pdf.

ancillary services, specifically non spinning reserves, to the ISO in the form of economically bid demand response resources.

The PLP projects are an outgrowth of the ISO's collaborative activities with California stakeholders such as the CPUC, the IOUs, demand response providers, and large commercial end use customers (both bundled and direct access) to promote the development of demand response resources and their integration into the ISO's markets. The coordination and funding of these projects was done in conjunction with the California Public Utilities Commission ("CPUC") as part of an overall effort to consider how to reshape utility demand response programs to best align with the ISO's new markets.

This effort is consistent with the Commission's Order 719 and the Commission's prior orders regarding the ISO's new market design under MRTU (Market Redesign and Tariff Update). In Order 719, the Commission directed regional transmission operators and independent system operators to undertake pilot programs promoting wider integration of demand response in wholesale markets.[4] And even before the Commission issued Order 719, the Commission had specifically directed the ISO to undertake such efforts in its September 2006 and July 2007 orders regarding the ISO's new markets.[5] As the ISO has reported to the Commission in prior status reports, the ISO's collaborative efforts with stakeholders on the issue of demand response have included participation in state demand response proceedings at the CPCU. This has included the CPUC's ongoing rulemaking, which commenced in 2007, to develop demand response methodologies and to align IOU programs with the ISO's new markets (CPUC Proceeding R.07-01-041)[6] and, most recently, in the IOUs applications to the CPUC for approval of specific demand response programs and budgets for the IOU current demand response program cycle.[7]

Scope of this Report

The June 25, 2007 Order includes an instruction to include analysis of the impact of demand response market dispatches on wholesale market prices. In the First Annual

[4] Wholesale Competition in Regions with Organized Electric Markets, 125 FERC ¶60,071 (October 17, 2008) (Docket Nos. RM07-19-000 and AD07-7-000), ¶ 581, requires RTOs and ISOs, in cooperation with their customers and stakeholders, "to perform an assessment, through pilot projects or other mechanisms, of the technical feasibility and value to the market of smaller demand response resources providing ancillary services, including whether (and how) smaller resources can reliably an economically provide operating reserves and report their findings to the Commission."

[5] California Independent System Operator Corp. 116 FERC 61,274 (issued September 21, 2006) and California Independent System Operator Corp. 119 FERC ¶ 61,313 (issued June 25, 2007).

[6] Order Instituting Rulemaking Regarding Policies and Protocols for Demand Response Load Impact Estimates, Cost-Effectiveness Methodologies, Megawatt Goals and Alignment with California Independent System Operator Market Design Protocols.

[7] CPUC Applications 08-06-001 (Southern California Edison Company) 08-06-002 (San Diego Gas & Electric Company); and 08-06-003 (Pacific Gas and Electric Company) for Approval of Demand Response Programs and Budgets for Years 2009 through 2011.

Report, the ISO noted that the then-current state of demand resource participation and market penetration and the nature of the Participating Load resources (which are large pumping resources) was such the ISO could not practically provide meaningful analysis on wholesale market price effects. This continues to be the case for the 2009 time period covered in this report. As demand resource product development increases in 2010, the ISO will strive to include such analysis in future reports.

Executive Summary and Request for Confidential Treatment

Types of Demand Respond Participation in the ISO

Pilot Participation: For 2009, the ISO added an additional mechanism, the 2009 Participating Load Pilot Agreement as a vehicle to allow demand response resources to participate in the ISO wholesale markets in a manner akin to a supply-side generator. The Participating Load Pilot Agreement was derived from the ISO's pro forma Participating Load Agreement, which historically has been the only vehicle for load to participate in the ISO's markets as a supply side resource. For the 2009 Participating Load Pilot Program, the ISO entered into a Participating Load Pilot Agreement with each IOU, and this agreement established the relationship between the IOU (as demand response provider) and the ISO and provided that this relationship was governed by the ISO Tariff and as modified by terms of the Participating Load Pilot Agreement.

Participating Load: As we have indicated in our past two reports, while "Participating Load" has sometimes been referred to as a "program," it is more properly characterized as a "mechanism"—one that enables demand response resources to interface with the ISO as dispatchable demand resources. The Participating Load Agreement establishes the relationship between the demand response provider and the ISO and provides that the relationship is governed by the ISO Tariff.

Upcoming Proxy Demand Resource: In 2010, the ISO anticipates introducing the Proxy Demand Resource Agreement as an additional vehicle to increase participation in ISO markets from demand response resources.

The Demand Response Participants

As of the date of this report, Participating Load consists of four (4) active participants; the three California IOUs (each operating under a PLP Pilot) and the California Department of Water Resources State Water Project ("CDWR-SWP"). These four participants schedule, bid, and settle under eight (8) unique Participating Load resource IDs. Of the eight, three represent single end-use customer loads, and five represent multiple underlying aggregated loads (be it the aggregation of large pumps or the aggregation of retail end-use customer load).

- **Scope of this Report** This report follows the ISO's approach in the First and Second Annual Reports of **not** including data for certain Pumped Hydro Storage Facilities. As the ISO explained in the First Annual Report, the reason for this approach is that these facilities operate differently than classic demand response resources, in that pumped hydro storage facilities also affirmatively schedule and increase load as well as providing classic demand curtailment . The ISO believes that this report's focus on classic demand response resources results in more meaningful content, because the reported information can be more meaningfully compared against other regions and organized markets, which was a primary purpose for imposing the reporting obligation.

Request for Confidential Treatment

Because of the limited number of participants, the ISO is again submitting the report as a confidential filing, accompanied with a request for confidential treatment. The ISO is submitting the report in two formats, (1) a Confidential Version and (2) a Redacted Version/Public Version (in which the confidential information has been redacted). In the past, the ISO has requested confidential treatment because the report covered only one market participant, CDWR-SWP. As mentioned above, for 2009, participation has increased with the addition of the California IOU pilots, and so, for the first time, multiple demand response participants are participating in the ISO market for non-spinning reserves. The 2009 pilots were limited in scope and duration, however, and so market participation is still heavily weighted by CDWR-SWP. Accordingly, because of the small number of participants (four) and the fact that CDWR-SWP remains the predominant non generation market participant, the ISO continues to provide the data in confidential form and seek confidential treatment. The ISO reports the Participating Load data in aggregated form.

Contribution of Demand Response to the ISO's Non Spinning Reserves Needs for 2009

On average, over the January 1st to November 20th period covered in this report, the ISO system needed approximately 906 MWs of Non-spinning Reserve capacity per hour to operate. The Participating Load participants that are the subject of this report contributed, on average, [redacted] MWs of Non-spinning Reserve, either through accepted bids or self provision. These [redacted] MWs represents nearly [redacted]% of the ISO's hourly Non-spinning Reserve need for 2009.

- In 2009, the Participating Load resources cleared (bid and/or self provided) an hourly maximum of [redacted] MW and a minimum of 0.01 MW of Non-spinning Reserve capacity to the ISO. On average, [redacted] MW per hour was bid or self-provided to the ISO.

Summary the ISO's Participating Load Program for the 2009 Time Period

Participating Load as Demand Response

In 2009, there were eight (8) active Participating Load resources. Of this eight, three (3) Participating Load resources were associated with large pumping resources and five (5) Participating Load resources were associated with retail end-use customer load.[8]

The active Participating Load resources in the reporting period can be broken down as follows:

Participant:	California Department of Water Resources State Water Project ("CDWR SWP")
No of Resource IDs:	Total of three These three Participating Load Resource IDs represent an aggregation of [redacted] (possibly more) pumps; they have been aggregated into three separate Participating Load "facilities," for scheduling and settlement purposes[9]
Participant:	Pacific Gas and Electric Company (PG&E)
No of Resource IDs:	Total of three These three Participating Load Resource IDs represent three large retail end-use customer loads, including a large retail store, an industrial process and a commercial office facility.
Participant:	Southern California Edison (SCE)
No of Resource IDs:	Total of one

[8] These eight Participating Load resources are unique, non-pumped hydro storage facilities.
[9] The [redacted] were originally identified in CDWR SWP's Participating Load Agreement, Schedule 1. The CAISO believes that some of the [redacted] pumps may, in fact, be aggregations of subsets of smaller pumps, which are grouped under one Resource ID. However, for purposes of this Report, the CAISO believes that verification of this additional level of detail is not relevant.

	This Participating Load Resource ID represents an aggregation of residential and commercial air conditioning cycling units aggregated into a single Participating Load resource for scheduling and settlement purposes.
Participant:	San Diego Gas and Electric Company (SDG&E)
No of Resource IDs:	Total of one
	This Participating Load Resource ID represents an aggregation of [redacted] small to medium commercial and industrial end-use customer loads aggregated into a single Participating Load resource for scheduling and settlement purposes.

Reporting Period for this Report; Time Constraints of the Data Set; Source of the Data Set

The reporting within this Third Annual Report reflects the same time constraints as the First and Second Annual Report with respect to the time frames for which the data can be captured and conveyed. In order to produce and present relevant data consistent with the June 25, 2007 Order, the ISO must largely cull out, correlate, and set out information compiled from a larger pool of underlying data in the ISO's settlement system.

The ISO's information gathering is constrained by the structure of the ISO's settlement system. The system performs settlements more than thirty (30) days in arrears of the dispatch of the resource. Under the ISO's settlement process, preliminary settlement statements are published thirty-eight (38) business days following the actual trade date, followed by final settlement statements, which are published fifty-one (51) business days after the actual trade date. While the implementation of Payment Acceleration on November 1, 2009 has changed this paradigm going forward, as a result of the time-lag in reconciliation and settlement based on the ISO's previous settlement system, the data set available for the ISO to use for this report mirrors the time lag, and the data for the end of the calendar year cannot be gathered and complied for the full year before the report due date of January 15.

Because of the time constraint, this Third Annual Report covers a time period (the "Reporting Period") from January 1, 2009 through November 22, 2009. The data relayed in this report has been taken from the following sources:

- final settlement data for the period January 1, 2009 through September 23, 2009, and
- preliminary settlement data for the periods, September 24, 2009 through October 12, 2009, and under the newly implemented Payment Acceleration, November 1, 2009 through November 22, 2009

The January 1, 2009 to November 22, 2009 Reporting Period comprises:

- eighty-nine percent (89%) of the 2009 calendar year period,
- 7,824 hours out of 8,760 total hours in the calendar year, or
- 326 out of 365 calendar days.

For future reporting purposes, the ISO respectfully submits that future annual reports could convey better information if the filing deadline were shifted, so that the reporting period could capture an entire twelve (12) month, 365 day calendar year. The file date would be best adjusted to a period more than 50 days after the calendar-year end, because the supporting data settlement data is not available until 50 days after December 31st.

In addition, the ISO Department of Market Monitoring (DMM) produces an annual report on the performance of the markets administered by the ISO. This DMM annual report covers the period of January 1st through December 31st of the year that is the subject of the report, and is published in a late-March to April time frame. Information in the DMM annual report pertaining to subjects such as system resource adequacy, ancillary services quantities and market performance, and other subjects, would be useful to ISO personnel in producing this annual report on demand response participation within the ISO markets.

Non-spin Capacity Awards and Payment from Participating Load Resources:

In the ISO's wholesale markets, market participants can chose to bid Ancillary Services (such as Non-Spinning Reserves), or to self-provide them. Market Participants that choose to bid Ancillary Services receive the Market Clearing Price. Accordingly, the ISO makes payment to them for the A/S capacity type that was offered and accepted. On the other hand, those Market Participants that fulfill their A/S obligation by self-providing A/S effectively receive an offset of their A/S obligation. The offset reduces or eliminates the quantity of A/S capacity that they must procure from the market.

On average, for the Reporting Period, the ISO system needed approximately 906 MWs of Non-spinning Reserve capacity per hour to operate. This procurement average of 906 MWs per hour is based upon the total ISO system requirement for non-spinning

reserve capacity divided by the total number of hours for the reporting period of Jan 1, 2009 to Nov 22, 2009, which equates to 7,824 hours.

The Participating Load participants covered in this report contributed, on average, [redacted] MWs of this product, either through accepted bids or through self-provision. This quantity of Participating Load participant contribution represented nearly [redacted]% of the ISO's hourly Non-spinning Reserve need during the Reporting Period.

However, the range of Non-spinning Reserve capacity offered (or self provided) exhibited some variations during certain, limited hours in 2009. In this regard, Participating Load resources cleared (bid and/or self provided) an hourly maximum of [redacted] MW and a minimum of 0.01 MW of Non-spinning Reserve capacity on certain occasions. On average, however, [redacted] MW per hour was bid or self-provided to the ISO.

TABLE 1 - Non-spinning Reserve Capacity Awards and Payment

Total Non-spin Capacity Bid (MW)	Total Non-spin Capacity Awarded (MW)	Total Non-spin Capacity Payments ($)	Total Non-spin Capacity Self-provided (MW)
[redacted]*	[redacted]*	[redacted]*	[redacted]

** These values represent cumulative totals based on eight separate Participating Load Resources.*

No-Pay for Unavailable Non-spin Capacity from Participating Load Resources:

No-Pay is a settlement mechanism to encourage resources, both generators and Participating Loads, to keep awarded Ancillary Services available for ISO dispatch (i.e., by following dispatch instructions and by avoiding uninstructed deviations). When triggered, the No-Pay mechanism results in the rescission of payment for the provision of Spinning Reserve and/or Non-spinning Reserve when, subsequent to: i) the A/S Award for such Ancillary Services and ii) the ISO payment for the services, the Ancillary Service becomes either Undispatchable Capacity, Unavailable Capacity, Undelivered Capacity, or, in certain circumstances, unsynchronized capacity. In 2009, only a tiny percentage of the total Non-spinning capacity awarded to Participating Load resources (approximately 0.63%) was rescinded through the No-Pay settlement mechanism during the reporting period.

TABLE 2 - Summary of Unavailable Non-Spin Capacity		
Total Non-spin Capacity Awarded and Self-provided (MW)	**Total Non-spin Capacity Unavailable Subject to the No Pay Provision (MW)**	**Total Non-spin Capacity Payment Rescinded Subject to the No-Pay Provision ($)**
[redacted]	[redacted]	[redacted]

Real-time Energy and Payment from Participating Load Resources:

To meet its real-time reliability needs, the ISO dispatches real-time energy from the Participating Load resources when it is economic to do so, based on the submitted bids that the Scheduling Coordinator has submitted to the ISO for the Participating Load resources. A Participating Load Resource can bid to curtail energy and to consume energy, in a fashion similar the way a generator can bid both incremental and decremental energy, by increasing or decreasing the generators energy output. Per ISO real-time dispatch instructions, a Participating Load Resource is either paid for the amount of energy that the resource is instructed to curtail or pays for the amount of energy that the resource is instructed to consume. (This is analogous to the ISO paying a generator to increase output ("INC") and, correspondingly, the generator paying the ISO to decrease output ("DEC") relative to the resource's scheduled energy amount.) Any deviations associated with the ISO's real-time dispatches, i.e. under-deliveries or over-deliveries, will be settled with the Participating Load resource as uninstructed energy. The *Total Energy Settlement* values shown in Table 3 and Table 4 below are the net settlement of the ISO's instructed and uninstructed energy for dispatches to decrease consumption and for dispatches to increase consumption, respectively.

TABLE 3- Decrease Energy Dispatches- Real-time Energy & Settlement Summary				
Total Real-time Energy Offered (MW)	**Total No. of Dispatches (Events)***	**Total Real-time Instructed Energy (MW)**	**Total Real time Energy Delivered (MW)**	**Total Energy Payments to PL Resources ($)**
[redacted]	425	[redacted]	[redacted]	[redacted]

**Where dispatches equal to or greater than 0.01 MW, in any interval, are aggregated by trade hour.*

TABLE 4- Increase Energy Dispatches- Real-time Energy & Settlement Summary				
Total Real-time Energy Offered (MW)	**Total No. of Dispatches (Events)***	**Total Real-time Instructed Energy (MW)**	**Total Real time Energy Delivered (MW)**	**Total Energy Charges to PL Resources ($)**
[redacted]+	38	[redacted]	[redacted]	[redacted]

**Where dispatches less than -0.01 MW, in any interval, are aggregated by trade hour.*
+Megawatt quantity attributed to ISO issued Exceptional Dispatch instructions

Real-time Energy Dispatch Detail for Participating Load Resources:

See Appendix A to Third Annual Report for a detailed breakdown of Real-time energy dispatch, by hourly event.

Summary of ISO Events by Month and Hour:

Given that the majority of Participating Load resource megawatts reported here are associated with large pumping resources used to move water around the state of California, these Participating Load resources do not exhibit the more traditional summer-peak demand response characteristic that one expects from demand response resources.

However, the fact that Participating Load resources, like large pumping resources, can participate in the ISO markets in all months and hours of the year means such resources can be of great benefit to the ISO as the system operator and helps further demonstrate the comparability that exists in the ISO wholesale market between supply-side and demand-side resources.

ISO Real-time Dispatches by Month:

The data below demonstrates the broad availability of these Participating Load resources to provide real-time imbalance energy, both the ability to increase and decrease energy consumption based on ISO system needs. Table 5 below lists the days and hours by month that Participating Load resources were called to curtail load, i.e. decrease energy and Table 6 lists the days and hours by month that PL resources were called on to consume energy, i.e. increase energy consumption. Table 7 lists the number of dispatch events by hour for the Reporting Period.